

Appl. No. 09/965,072  
Amtd. dated 8 Aug 2003  
Reply to Office action of 8 May 2003

Attorney Docket No. 57.0373 US NP

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## REMARKS

Claims 1-22 are pending in this application. Claims 1-22 were rejected in the Office Action dated 8 May 2003 (the "Office Action"). Applicants have amended claims 1-5 and 14 in order to more particularly and completely claim the present invention. No new matter has been introduced. Allowance of claims 1-22 is respectfully requested.

In the Office Action, the Examiner rejected claims 1-3, 7-11, 14-15 and 17-22 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,037,585 to Gadeken (hereinafter "Gadeken"), and rejected claims 4-6, 13 and 16 under 35 U.S.C. 103(a) as being unpatentable over Gadeken.

According to the disclosure of the present invention, scale deposits are analyzed to determine the Radium to Barium abundance ratio. See page 16, line 31 to page 17, line 11. This ratio is in turn used to derive the physical quantity of scale present. Thus, according to the invention, the relative concentration of radium to other scale components is used to determine the physical quantity of scale. This is not disclosed or suggested in the cited prior art.

Gadeken is directed to a method of removing errors from conventional spectrographic isotope tracer logs caused by emissions from scale. Prior to Gadeken, such errors were typically removed by running a "before log". Thus, Gadeken's method is an effort to eliminate the need for such "before logs" by calculating the position and quantity of emissions attributable to scale downhole. Note that while Gadeken states that its method calculates simply "the quantity of scale," it is respectfully submitted that Gadeken contains no teaching or suggestion for determining the physical quantity or mass of scale at all, and that instead the disclosed method is for calculating the quantity of emissions attributable to the scale.

Furthermore, nowhere does Gadeken teach or suggest deriving physical quantity of scale based on a relative concentration of radium to other scale components. This is not

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surprising since Gadeken only addresses the technical problem of errors in spectrographic isotope tracer logs due to the emissions from scale. It is believed that Gadeken does not disclose the using relative concentrations of radium to other scale components because it is unnecessary meet its intended purpose. All that is needed in Gadeken is to determine what part of the measured radiation is attributable to the scale so that the measured data can be corrected.

Claim 1, as amended, recites: "(c) deriving the physical quantity of said scale using said abundances and a relative concentration of radium and other scale components." The other independent claim, claim 14 has been amended to include similar language. Since the recited claim language is not taught or suggested by Gadeken, it is respectfully submitted that the prior art rejections be withdrawn.

In light of the above amendments and remarks, applicant believes that the present application and claims 1-22 are in proper condition for allowance. Such allowance is earnestly requested. If the Examiner is contemplating any action other than allowance of all pending claims, the Examiner is urged to contact Applicant's representative, Mr. William Wang, in the United Kingdom at 011-44-1223-325268.

Respectfully submitted,



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